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AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Canceled)

2. (Currently amended): ~~An apparatus for the pyrolysis of waste, comprising:~~

~~—— a rotating cell formed of a cylinder, said cylinder having a diameter and two ends, in combination with a truncated cone rotating on the same axis, said truncated cone having a large base and a small base, said large base and said small base each having a diameter, the diameter of said cylinder being larger than the diameter of said large base of said truncated cone, and a region extending between said large base of said truncated cone and said end of said cylinder which is adjacent to said large base of said truncated cone,~~

~~—— said region forming a retaining threshold resulting from a difference between the diameter of the cylinder and the diameter of the large base of the truncated cone and creating a region of intimate contact of the waste with itself whereby the waste is converted into coke which is used in the truncated cone as fuel for pyrolysis of the waste~~ The apparatus of claim 17, further comprising a hopper for charging the waste at one end of said cell, an ash box at the other end of said cell, and a recovery chimney, in connection with said cell, for recovering gases from said cell.

3. (Canceled)

4. (Previously presented) The apparatus according to Claim 2, wherein the truncated cone further comprises a network of nozzles fed via channels distributing combustion air in a substoichiometric amount, thereby combusting the coke which is used as fuel in the pyrolysis of

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the waste.

5-15. (Canceled)

16. (Previously presented): The apparatus according to Claim 2, wherein said region comprises a conical section positioned between said cylinder and said truncated cone.

17. (Currently amended): An apparatus for the pyrolysis of waste, comprising:

a rotating cell formed of a cylinder, said cylinder having a diameter and two ends, in combination with a truncated cone rotating on the same axis, said truncated cone having a large base and a small base, said large base and said small base each having a diameter, the diameter of said cylinder being larger than the diameter of said large base of said truncated cone, and a region extending between said large base of said truncated cone and said end of said cylinder which is adjacent to said large base of said truncated cone,

said region forming a retaining threshold resulting from a difference between the diameter of the cylinder and the diameter of the large base of the truncated cone and creating a region of intimate contact of the waste with itself whereby the waste is converted into coke which is used in the truncated cone as fuel for pyrolysis of the waste,

wherein a main longitudinal axis of the rotating cell is inclined with respect to the horizontal.

18. (Previously presented): The apparatus according to Claim 17, wherein said region comprises a conical section positioned between said cylinder and said truncated cone.

19. (Currently amended) ~~The apparatus according to Claim 17~~ An apparatus for the pyrolysis of waste, comprising:

a rotating cell formed of a cylinder, said cylinder having a diameter and two ends, in

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combination with a truncated cone rotating on the same axis, said truncated cone having a large  
base and a small base, said large base and said small base each having a diameter, the diameter of  
said cylinder being larger than the diameter of said large base of said truncated cone, and a region  
extending between said large base of said truncated cone and said end of said cylinder which is  
adjacent to said large base of said truncated cone,

said region forming a retaining threshold resulting from a difference between the diameter  
of the cylinder and the diameter of the large base of the truncated cone and creating a region of  
intimate contact of the waste with itself whereby the waste is converted into coke which is used in  
the truncated cone as fuel for pyrolysis of the waste,

wherein the truncated cone further comprises a network of nozzles fed via channels  
distributing combustion air in a substoichiometric amount, thereby combusting the coke which is  
used as fuel in the pyrolysis of the waste.

20. (Currently amended) The apparatus according to Claim 2 19, ~~wherein a recovery~~  
~~chimney is placed on the cylinder in the rotating cell~~ further comprising a hopper for charging the  
waste at one end of said cell, an ash box at the other end of said cell, and a recovery chimney, in  
connection with said cell, for recovering gases from said cell.

21. (Currently amended) The apparatus according to Claim 2 23, ~~wherein the truncated~~  
~~cone further comprises a network of combustion air distribution nozzles~~ further comprising a  
hopper for charging the waste at one end of said cell, an ash box at the other end of said cell, and  
the recovery chimney, in connection with said cell, for recovering gases from said cell.

22. (Currently amended) The apparatus according to Claim 2 24, ~~wherein a main~~  
~~longitudinal axis of the rotating cell is inclined with respect to the horizontal~~ further comprising a

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hopper for charging the waste at one end of said cell, an ash box at the other end of said cell, and a  
recovery chimney, in connection with said cell, for recovering gases from said cell.

23. (Currently amended) ~~The apparatus according to Claim 17~~ An apparatus for the  
pyrolysis of waste, comprising:

a rotating cell formed of a cylinder, said cylinder having a diameter and two ends, in  
combination with a truncated cone rotating on the same axis, said truncated cone having a large  
base and a small base, said large base and said small base each having a diameter, the diameter of  
said cylinder being larger than the diameter of said large base of said truncated cone, and a region  
extending between said large base of said truncated cone and said end of said cylinder which is  
adjacent to said large base of said truncated cone,

said region forming a retaining threshold resulting from a difference between the diameter  
of the cylinder and the diameter of the large base of the truncated cone and creating a region of  
intimate contact of the waste with itself whereby the waste is converted into coke which is used in  
the truncated cone as fuel for pyrolysis of the waste,

wherein ~~said~~ a recovery chimney is placed on the cylinder in the rotating cell.

24. (Currently amended) ~~The apparatus according to Claim 17~~ An apparatus for the  
pyrolysis of waste, comprising:

a rotating cell formed of a cylinder, said cylinder having a diameter and two ends, in  
combination with a truncated cone rotating on the same axis, said truncated cone having a large  
base and a small base, said large base and said small base each having a diameter, the diameter of  
said cylinder being larger than the diameter of said large base of said truncated cone, and a region  
extending between said large base of said truncated cone and said end of said cylinder which is

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adjacent to said large base of said truncated cone,

said region forming a retaining threshold resulting from a difference between the diameter of the cylinder and the diameter of the large base of the truncated cone and creating a region of intimate contact of the waste with itself whereby the waste is converted into coke which is used in the truncated cone as fuel for pyrolysis of the waste,

wherein the truncated cone further comprises a network of combustion air-distribution nozzles.

25. (Currently amended) The apparatus according to Claim ~~17~~ 19, wherein a main longitudinal axis of the rotating cell is inclined with respect to the horizontal.